

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims:

1-44 (Cancelled)

45. (Currently Amended) An immunological vaccine delivery adjuvant composition ~~useful for enhancing the immune response against an active agent~~, comprising:

~~a first adjuvant consisting essentially of amorphous calcium phosphate particles~~ a calcium phosphate and an active agent which is present in an amount sufficient to elicit a host response that protects a host against a pathogen; and

~~a liquid component,~~

~~wherein said composition is said adjuvant composition~~ formulated as a hardenable, an injectable paste having a solids content of greater than or equal to 40 wt%.

46. (Currently Amended) ~~An immunological adjuvant~~ The composition of claim 45, ~~wherein said active agent is selected from the group consisting of~~ useful for enhancing the immune response against an active agent, comprising:

~~a first adjuvant comprising amorphous or nanocrystalline calcium phosphate particles;~~

~~a liquid component; and~~

~~an active agent selected from the group consisting of~~ a bacteria, or fragment thereof, a virus, or fragment thereof, a nucleic acid molecule, a protein, a hapten, a tolergen, and an allergen ~~antigens, bacteria or viruses or fragments thereof, haptens, allergens and immunogens,~~

~~said adjuvant composition formulated as an injectable paste having a solids content of greater than or equal to 40 wt%.~~

47. (Currently Amended) The composition of claim ~~45~~ ~~46~~ or 47, wherein said calcium phosphate comprises particles having ~~have~~ a diameter between 0.1 nm and 900 nm.

48. (Currently Amended) The composition of claim ~~47~~ 48, wherein said particles comprise 25-100% by weight of said composition ~~consists of said particles having a diameter between 0.1 nm and 900 nm.~~

49. (Currently Amended) The composition of claim ~~45~~ ~~46~~ or 47 further comprising an a ~~second~~ adjuvant.

50. (Currently Amended) The composition of claim ~~49~~ 50, wherein said ~~second~~ adjuvant is selected from the group consisting of muramyl dipeptide, aluminum hydroxide, aluminum phosphate, hydroxyapatite, Incomplete Freund's adjuvant, and Complete Freund's adjuvant.

51. (Currently Amended) The composition of claim ~~49~~ 50, wherein said adjuvant is the ~~first and second adjuvants are~~ selected so as to elicit an immune response from targeted cells or cell types.

52. (Currently Amended) The composition of claim ~~49~~ 50, wherein said adjuvant is the

~~first and second adjuvants are~~ selected so as to elicit an immune response from cells of the same type.

53. (Currently Amended) The composition of claim ~~49~~ 50, wherein said adjuvant is the ~~first and second adjuvants are~~ selected so as to elicit an immune response from cells of different types.

54. (Currently Amended) The composition of claim ~~49~~ 50, further comprising an endogenous adjuvanticity enhancing means.

55. (Cancelled)

56. (Currently Amended) The composition of claim ~~45~~ 47 further comprising a cytokine.

57. (Currently Amended) The composition of claim ~~56~~ 45, wherein said cytokine is selected from the group consisting of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-11, IL-13, G-CSF, IL-15, GM-CSF, OSM, LIF, IFN- γ , IFN- α , IFN- β , B7.1, B7.2, TNF- α , TNF- β , LT- β , CD40 ligand, Fas ligand, CD27 ligand, CD30 ligand, 4-1BBL, IL-8, MCP-1, MIP- α , MIP- β , RANTES, TGF- β , IL-1 α , IL-1 β , IL-1 RA, IL-10, IL-12, and MIF.

58. (Currently Amended) The composition of claim ~~45~~ 47, wherein said calcium phosphate comprises amorphous calcium phosphate, nanocrystalline calcium phosphate, poorly

crystalline calcium phosphate, dicalcium phosphate dihydrate, tricalcium phosphate, tetracalcium phosphate, monetite, monocalcium phosphate monohydrate, octacalcium phosphate, or hydroxyapatite ~~the nano-crystalline calcium phosphate comprises hydroxyapatite.~~

59. (Currently Amended) A method for stimulating an immune response in a mammal, said method comprising:

administering to the mammal a composition comprising a calcium phosphate and an active agent which is present in an amount sufficient to elicit a host response that protects a host against a pathogen, and ~~amorphous or nano-crystalline calcium phosphate particles and~~
~~an active agent selected from the group consisting of antigens, bacteria or viruses or fragments thereof, nucleic acids, proteins, haptens, allergens and immunogens, said composition~~
is formulated as a hardenable, an injectable paste having a solids content of greater than or equal to 40 wt%.

60. (Currently Amended) A method for increasing immunogenicity of an antigen in a mammal, said method comprising:

co-administering both an active agent in an amount sufficient to elicit a host response that protects said mammal against a pathogen ~~antigen~~ and a composition comprising ~~amorphous a~~
calcium phosphate formulated as an injectable paste having a solids content of greater than or equal to 40 wt%.

61 (New) The method of claim 59 or 60, wherein said active agent is selected from the

group consisting of a bacteria, or fragment thereof, a virus, or fragment thereof, a nucleic acid molecule, a protein, a hapten, a tolergen, and an allergen.

62. (New) The method of claim 59 or 60, wherein said calcium phosphate comprises particles having a diameter between 0.1 nm and 900 nm.

63. (New) The method of claim 62, wherein said particles comprise 25-100% by weight of said composition.

64. (New) The method of claim 59 or 60, wherein said composition further comprises an adjuvant.

65. (New) The method of claim 64, wherein said adjuvant is selected from the group consisting of muramyl dipeptide, aluminum hydroxide, aluminum phosphate, hydroxyapatite, Incomplete Freund's adjuvant, and Complete Freund's adjuvant.

66. (New) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from targeted cells or cell types.

67. (New) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from cells of the same type.

68. (New) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from cells of different types.

69. (New) The method of claim 64, wherein said composition further comprises an endogenous adjuvanticity enhancing means.

70. (New) The method of claim 59 or 61, wherein said composition further comprises a cytokine.

71. (New) The method of claim 70, wherein said cytokine is selected from the group consisting of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-11, IL-13, G-CSF, IL-15, GM-CSF, OSM, LIF, IFN- γ , IFN- α , IFN- β , B7.1, B7.2, TNF- α , TNF- β , LT- β , CD40 ligand, Fas ligand, CD27 ligand, CD30 ligand, 4-1BBL, IL-8, MCP-1, MIP- α , MIP- β , RANTES, TGF- β , IL-1 α , IL-1 β , IL-1 RA, IL-10, IL-12, and MIF.

72. (New) The method of claim 59 or 60, wherein said calcium phosphate comprises amorphous calcium phosphate, nanocrystalline calcium phosphate, poorly crystalline calcium phosphate, dicalcium phosphate dihydrate, tricalcium phosphate, tetracalcium phosphate, monetite, monocalcium phosphate monohydrate, octacalcium phosphate, or hydroxyapatite.